

Reference : EHNH



Determination of the Planck constant by experiment!

Frequency / wavelength conversion

Excellent illustration of the light-matter interaction

This model allows students to observe and quantify the interaction between light and matter and to find the formula governing these interactions: $\Delta E = h\nu$.

It is composed of 6 electroluminescent diodes illuminating in different wavelengths and distributed over the entire visible spectrum, from purple to red.

A rotary switch selects the LED studied and a potentiometer to vary the DC voltage applied at the input.

Two pairs of safety banana sockets connect the device to an ammeter and a voltmeter to measure the current flowing through the LED and the voltage across it.

By precisely determining the threshold voltage of each of the LEDs, the graphical representation of $E = f(\nu)$ makes it possible to find the Planck h constant with precision and to demonstrate the relation $\Delta E = h\nu$.
Technical characteristics:

- Power supply: 12 V continuous by 2 safety banana sockets
- Dimensions: 150 x 100 x 50 mm approximately
- Adjustable tilt stand